

**BEFORE THE
IOWA UTILITIES BOARD**

Docket No. SPU-2015-0039

**Black Hills/Iowa Gas Utility Company, LLC
d/b/a Black Hills Energy**

**Prepared Direct Testimony of
Robert J. Amdor**

Before the Iowa Utilities Board

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Direct Testimony of Robert J. Amdor

1 **I. Introduction**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
3 **OCCUPATION.**

4 A. My name is Robert J. Amdor, and my business address is 1102 E.
5 First Street, Papillion, Nebraska. I am employed by Black Hills Utility
6 Holdings, Inc. ("BHUH") in the position of Manager of Regulatory
7 Services.

8 **Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.**

9 A. I have been employed by BHUH in my current position since Black
10 Hills/Iowa Gas Utility Company, LLC d/b/a Black Hills Energy ("BHE" or
11 "Company") acquired the Iowa natural gas operations of Aquila, Inc.
12 ("Aquila") in July 2008. Previously, I was employed by Aquila and its
13 predecessor companies in the Regulatory Services department for 13
14 years. I earned a Bachelor's degree from Iowa State University and a
15 Juris Doctorate from Creighton University and have been a member of
16 the Nebraska Bar Association over thirty years.

17 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGER OF**
18 **REGULATORY SERVICES.**

1 A. I am responsible for the regulatory relationship and all regulatory
2 related matters for the states of Iowa, Kansas and Nebraska. My team
3 is responsible for compliance, external regulatory relations, internal
4 support of regulatory issues, regulatory planning and all applications
5 with state regulatory agencies, including this application for farm tap
6 testing and replacement and cost recovery.

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. BHE witness Tracy L. Peterson has addressed the background of
9 customer-owned fuel lines, the associated safety risks of those lines,
10 and the Company's proposal to test, replace and maintain the lines.
11 My testimony will address BHE's alternative cost recovery proposals
12 and issues raised in the customer comment meetings. I will also
13 sponsor the proposed tariff.

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15 **II. BHE Farm Taps**

16 **Q. PLEASE SUMMARIZE THE RECENT ANNUAL USAGE AND**
17 **MARGIN REVENUE OF BHE'S IOWA FARM TAP CUSTOMERS.**

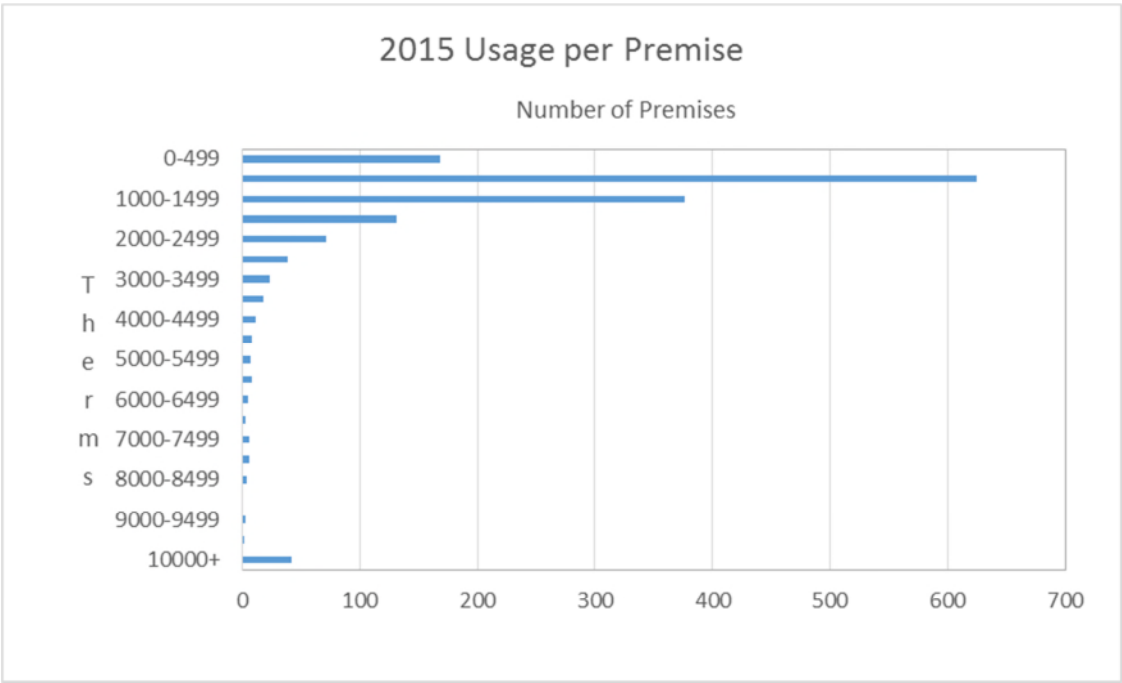
18 A. The table below shows the number of farm tap customers at year-end
19 2012-15 along with associated annual natural gas usage and margin
20 revenue.

Black Hills Iowa Gas Farm Tap Customers, Usage and Margin

	2012	2013	2014	2015
Year-end Customers	1,546	1,549	1,558	1,557
Volumes (Actual, Th)	5,002,579	7,159,054	6,526,595	3,248,114
Margin Revenue (\$000s)	\$718,079	\$867,614	\$871,698	\$798,896

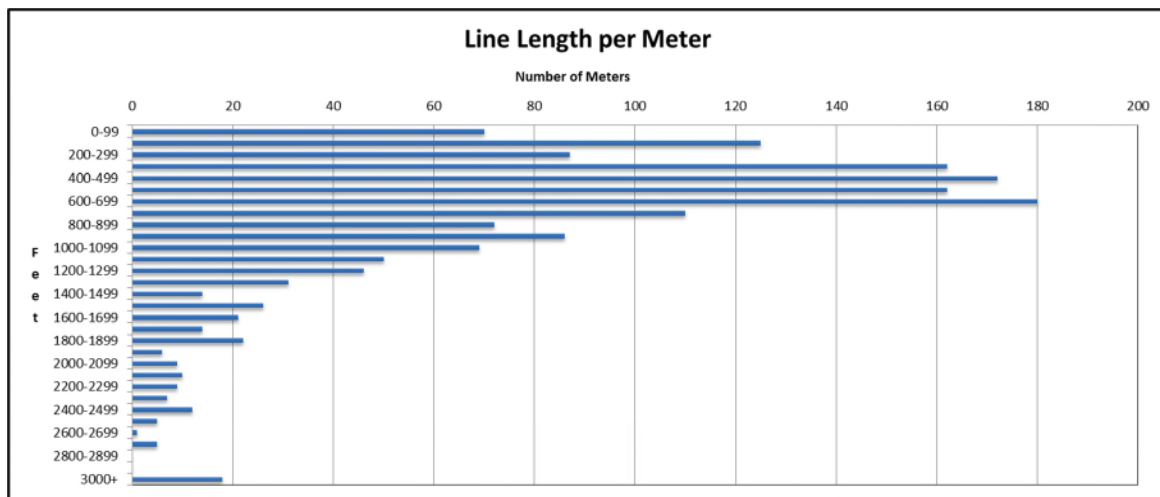
Most of these customers are sales service customers; one farm tap customer receives transportation service. The annual usage for these customers varies from zero to over 193,000 Therms in 2015. Most of these customers use natural gas service for space heating, and some use natural gas for grain drying and other commercial uses.

The chart below shows the frequency distribution for customer usage in Therms per meter:



Q. PLEASE SUMMARIZE THE LENGTH OF FARM TAP FUEL LINES OWNED BY BHE'S CUSTOMERS.

A. Customer-owned fuel lines range in length from a few yards to over a mile. The chart below shows a frequency distribution for line lengths based on 2013 estimates using a range finder. This data provides a fairly accurate estimate of line lengths. The estimate is based on an assumption that the lines run directly from the tap to the premises. Although many customer-owned fuel lines are not laid in straight lines from the tap to the premises, there is no other way to estimate the lengths of those lines because BHE does not possess maps or other data to establish the exact location of the lines.



1 **III. Cost Recovery Proposal**

2 **Q. PLEASE SUMMARIZE THE COMPANY'S GOALS FOR COST**
3 **RECOVERY RELATED TO THIS PROPOSAL.**

4 A. BHE has proposed a ratemaking solution that covers the cost of this
5 large, complex, multi-year project, while recognizing established
6 regulatory principles and balancing the interests of affected parties. To
7 commit to these additional investments, BHE must secure full recovery
8 of its capital costs. BHE is proposing two alternative options for
9 accomplishing these objectives and requesting that the Board select
10 the appropriate alternative. BHE will accept either alternative below or
11 any option in between. Both alternatives assume BHE will replace the
12 entirety of a customer-owned fuel line that does not pass any of the
13 tests described in Mr. Peterson's direct testimony.

14 **Q. PLEASE EXPLAIN BHE'S FIRST COST RECOVERY PROPOSAL**
15 **ALTERNATIVE.**

16 A. Alternative 1 assumes the Company replaces all of the customer-
17 owned fuel lines, holds the costs of each replaced line in a regulatory
18 asset account from the date the line is placed in service until the
19 Company's next rate review, and recovers the costs through a
20 surcharge starting at the conclusion of that rate review. The table
21 below shows the calculation of the cost of capital and depreciation, as
22 well as the surcharge amount, if the Company pays for the full cost of
23 replacement.

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Alternative 1 – Socialized Cost Recovery

	Year 1	Year 2	Year 3	Year 4	Year 5
Farm tap replacements, beginning of year	-	2,688,210	5,302,494	7,844,885	10,317,360
New Investment (\$13.6 million, invested 20% per year)	2,725,688	2,725,688	2,725,688	2,725,688	2,725,688
Annual depreciation expense (2.75%)*	37,478	111,404	183,297	253,213	321,206
Net plant at year end	2,688,210	5,302,494	7,844,885	10,317,360	12,721,843
Deferrals to Regulatory Asset Account 182:					
Carrying Charge $[(0.52 \times 9.6\%) + (.48 \times 4.4\%)] / (1 - .38)$	308,017	607,563	898,872	1,182,170	1,457,677
Deferred O&M costs (estimated cost of 351 tests)	150,000	150,000	150,000	150,000	150,000
Amortization of deferral balance:					
	Total Deferrals	Per Cust per Month (months 1-36 after next rate case order)			
Average impact on 153,257 GS customers per month	5,204,299	\$ 0.94	(Total deferrals / 153,257 GS customers / 36 months)		

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Q. HOW DOES BHE KNOW HOW MANY FEET OF FUEL LINE WILL BE REPLACED?

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A. BHE does not own the fuel lines, so it does not have maps or information to determine the actual line lengths. BHE performed a study in 2013 using range finders to estimate the straight-line distance from each farm tap to the associated premise. The study provided a line length for all farm tap lines, and the sum of those lengths totals 1.36 million feet. BHE management believes the actual line replaced will be less than this total.

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Q. HOW HAS BHE DETERMINED THE PRICE PER LINEAL FOOT FOR REPLACEMENTS?

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A. BHE assumed \$10 per lineal foot to replace these lines, and this price is consistent with the cost of similar line replacements performed by the Company across Iowa¹. Using these assumptions, the projected

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¹ In Docket RPU-2016-0004, BHE filed "Cost Variance Support Document" July 26, 2016 to explain the average 2015 costs to install various types of pipe in various conditions. The average cost to install 1" PE service lines in grass and dirt was \$8.09 per foot.

capital cost for replacement of all customer-owned farm tap fuel lines is estimated to be \$13.6 million.

Q. DOES BHE INTEND TO TEST AND REPLACE ALL OF THESE LINES WITHIN FIVE YEARS?

A. Yes, but it is unlikely that exactly twenty percent of the lines will be tested each year because it will take more time in year one to develop processes. It is reasonable to assume most of the lines will be tested and replaced in years 2-5.

Q. WHAT COMPONENT CAPITAL COSTS HAS BHE ASSUMED?

A. To calculate the capital costs for these replacements, BHE has assumed current market returns. For example, the calculations assume 52 percent equity, a 4.4 percent cost of debt, and a 9.6 percent return on equity. The equity return is the average approved rate of return on equity for natural gas local distribution companies reported in 2015 by SNL Research (formerly Regulatory Research Associates). These assumptions result in capital costs and depreciation that total \$5,204,299 over the five-year testing and replacement program.

Q. WHAT ASSUMPTIONS HAS BHE USED FOR CALCULATING DEPRECIATION AND NET PLANT?

A. To calculate the cost of capital each year, depreciation expense must be calculated to derive net plant at the end of each year. BHE will use the approved depreciation rate for each class of assets when

1 depreciation expense is calculated each year. For the estimate in the
2 table above, BHE has used 2.75 percent, which is the rate approved in
3 BHE's last Iowa rate review for polyethylene fuel lines.

4 **Q. THE TABLE ABOVE SHOWS ANNUAL O&M EXPENSES. PLEASE**
5 **EXPLAIN THE O&M COSTS PROPOSED FOR RECOVERY.**

6 A. In addition to capital carrying costs, BHE will experience a substantial
7 increase in operations and maintenance expense related to the
8 maximum allowable operating pressure ("MAOP") testing of the fuel
9 lines over the five-year program. BHE estimates that the cost of a two-
10 man crew and fully loaded vehicle needed to perform the test will be
11 about \$425 per test, and that the Company can perform about 350
12 tests per year. This represents approximately a \$150,000 annual
13 increase in O&M costs to perform the program's safety tests. BHE is
14 not requesting immediate recovery of these costs, but respectfully asks
15 the Board for authority to defer them in an account with the capital
16 costs for subsequent recovery at the conclusion of BHE's next rate
17 review.

18 **Q. HOW AND WHEN DOES THE COMPANY PROPOSE TO RECOVER**
19 **THESE COSTS?**

20 A. BHE proposes to hold these costs in a regulatory asset account until
21 the Company's next rate review and then to recover the costs through
22 a monthly surcharge. For example, if the costs are recovered from all

1 General Service customers over 36 months, the surcharge would be
2 \$0.94 per month.

3 **Q. IS THE 36-MONTH SURCHARGE PROPOSAL THE ONLY**
4 **RECOVERY METHOD ACCEPTABLE TO BHE?**

5 A. BHE has used the 36-month surcharge as a reasonable proposal to
6 demonstrate rate impacts. The Company realizes other alternatives
7 are possible, including a special rate for farm tap customers or
8 recovery of the costs through the volumetric rate. BHE is open to
9 resolving rate design issues in the Company's next rate review
10 provided that full cost recovery is achieved.

11 **Q. PLEASE DESCRIBE BHE'S SECOND COST RECOVERY**
12 **ALTERNATIVE.**

13 A. Alternative 2 assumes a sharing of the line replacement costs by
14 requiring the farm tap customer to pay for all costs over \$10,000 (i.e.,
15 the customer pays for that portion of a line longer than 1,000 feet).
16 The table below shows the calculation of carrying charges and O&M
17 costs, similar to the table above, for Alternative 1. Using these
18 assumptions and the same calculation method utilized for Alternative
19 1, the carrying charges after five years would total \$4,417,278, and the
20 surcharge would be \$0.80 per month for thirty-six months.

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Alternative 2 – Tap Customer Shares Costs

	Year 1	Year 2	Year 3	Year 4	Year 5
Farm tap replacements, beginning of year	-	2,213,236	4,365,607	6,458,789	8,494,408
New Investment (\$11.2 million, invested 20% per year)	2,244,092	2,244,092	2,244,092	2,244,092	2,244,092
Annual depreciation expense (2.75%)*	30,856	91,720	150,910	208,473	264,452
Net plant at year end	2,213,236	4,365,607	6,458,789	8,494,408	10,474,048
Deferrals to Regulatory Asset Account 182:					
Carrying Charge [(0.52*9.6%)+(.48*4.4%)]/(1-.38)	253,594	500,214	740,052	973,295	1,200,123
Deferred O&M costs (estimated cost of 351 tests)	150,000	150,000	150,000	150,000	150,000
Amortization of deferral balance:	Total Deferrals	Per Cust per Month (months 1-36 after next rate case order)			
Average impact on 153,257 GS customers per month	4,417,278	\$ 0.80	(Total deferrals / 153,257 GS customers / 12 months)		
Customer rate impact by year, assuming rate case in year 6:	\$ -	\$ -	\$ -	\$ -	\$ -

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Q. HOW DOES BHE PROPOSE TO TREAT THESE FUEL LINE

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REPLACEMENT COSTS IN ITS NEXT RATE REVIEW?

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A. The capital and labor costs to replace the lines would be included in

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rate base in the Company's next rate review. The costs to perform the

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line safety tests would be one-time costs, so they would not be

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included in the Company's cost of service in the next rate review.

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Q. DOES BHE HAVE AN OPINION REGARDING WHICH

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ALTERNATIVE THE BOARD SHOULD APPROVE?

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A. BHE believes the no-sharing alternative (Alternative 1) is appropriate

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because it is consistent with established Iowa regulatory principles. For

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example, when assets are replaced in any town, the costs are

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allocated to various customer classes and recovered from all

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ratepayers. Farm tap customers have paid for general system

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improvements across the state for at least two decades, so treating

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fuel line replacements in a similar manner is consistent with other

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replacements. It should also be noted that line extension principles

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should not be applied to these lines, because the feasibility model

1 used for lines extensions for new customers has never been used for
2 system replacements.

3 **Q. HAS BHE CONSIDERED ALLOWING LANDOWNERS TO REPLACE**
4 **THE LINES?**

5 A. BHE has considered an optional line replacement program, where farm
6 tap customers would have the option to hire approved third-party
7 contractors to replace the line. This approach is similar to the
8 Minnesota replacement program authorized in the early 1990s, where
9 landowners continue to own the fuel lines and the utility or other
10 contractors may rebuild the lines. NNG farm tap owners in Minnesota
11 are still replacing fuel lines over twenty-five years after the testing
12 program began, however, and BHE's counterpart distribution utility in
13 Minnesota has no maintenance records or line location data. BHE
14 believes the better solution is for the Company to replace and own
15 lines that fail any of the specified tests.

16 **Q. WHICH BHE WITNESS SPONSORS THE TARIFF SHEETS**
17 **ATTACHED TO THE COMPANY'S APPLICATION?**

18 A. I am sponsoring the tariffs, which are incorporated by reference.
19

20 **III. Additional Information Required by Board**

21 **Q. WHICH BHE WITNESS IS SPONSORING THE ADDITIONAL**
22 **INFORMATION BHE FILED WITH THE BOARD ON NOVEMBER 1,**

1 **2016, IN RESPONSE TO THE QUESTIONS SET FORTH IN THE**
2 **BOARD ORDER ISSUED ON OCTOBER 18, 2016?**

3 A. I am sponsoring that additional information, which is incorporated by
4 reference in my direct testimony.

5
6 **IV. Summary of Requests**

7 **Q. PLEASE SUMMARIZE THE RELIEF THE COMPANY IS**
8 **REQUESTING IN THIS DOCKET**

9 A. BHE respectfully requests that the Board:

- 10 • Approve the proposed tariff to establish rights and
11 responsibilities of farm tap customers;
- 12 • Authorize the proposed safety testing and line replacement
13 program;
- 14 • Allow eligible capital and O&M costs to be held in a regulatory
15 asset account for recovery at the conclusion of the Company's
16 next rate review;
- 17 • Authorize recovery of the eligible costs using a cost allocation
18 and rate design approved in the Company's next rate review;
19 and
- 20 • Waive any Board rules to the extent necessary to grant the
21 other relief requested by BHE.

22 **Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

23 A. Yes.